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INL wins four R&D 100 Awards, plus a Nano50

Extending a consecutive winning streak to a full decade, 22 U.S. Department of Energy Idaho National Laboratory researchers have been selected to receive four R&D 100 Awards in R&D Magazine's worldwide competition for the top 100 technologies in 2006. One of the technologies also won a Nano50 Award, adding to INL's distinguished scientific record and international reputation.

Secretary of Energy Samuel W. Bodman, recognizing the award-winning accomplishments, said, "I congratulate the researchers who have won these awards, which highlight the power and promise of DOE's investments in science and technology. Through the efforts of dedicated and innovative scientists and engineers at our national laboratories, DOE is helping to enhance our nation's energy, economic and national security."

"Being selected in this way credits the scientific eminence of our employees and recognizes the lab's standout accomplishments in science and technology. This is the kind of success that sets INL apart as one of the nation's respected research institutions," said INL's Chief Research Officer J.W. Rogers, Jr. in announcing R&D Magazine's selection of four of six INL-nominated technologies.

"The results speak for themselves. Our INL researchers have delivered a banner year of scientific inquiry, technology development and recognition. In fact, Battelle and the laboratories it manages earned a total of 17 R&D 100 Awards this year, which is most impressive," said INL Laboratory Director John Grossenbacher,

One INL R&D 100 winner also earned the Nano 50 Award from the NanoTech Briefs organization. In its second year, this award recognizes technology advancements conducted at the nanotechnology level. The Nano-Composite Arsenic Sorbent (N-CAS) was selected for this award because this nano-engineered composite removes arsenic from drinking water effectively, efficiently and affordably.

"We hope that our long-lasting, high-capacity nano-composite polymer will help deliver safe drinking water to Americans and people around the world. The exceptional recognition for our team's success is very motivating," said Troy Tranter, research team leader.

Technologies and those researchers earning awards are:

Nano-Composite Arsenic Sorbent (N-CAS) – Troy Tranter, Nick Mann, Scott Herbst and Terry Todd developed a long-lasting, high-capacity nano-composite polymer particle engineered to remove arsenic concentrations from water – rendering it safe to drink and compliant with U.S. and world drinking water standards.

Compact High Efficiency Natural Gas Liquefier – Bruce Wilding, Terry Turner, Mike McKellar, Kerry Klingler, Dennis Bingham, Frank Carney and Douglas Stacey have perfected a new, patented process to make liquefied natural gas (LNG) directly from pipeline gas without pre-treatment for CO₂ removal at prices competitive with large-scale LNG plants.

INL Robot Intelligence Kernel – David Bruemmer, Douglas Few, Miles Walton, Curtis Nielsen and Robert Kinoshita have developed a low-cost, on-board control architecture that gives robots exceptional new levels of autonomy and intelligence that revolutionizes robot capabilities and the robot/operator relationship.

Xtreme Xylanase (Hemicellulase) – Bill Apel, Vicki Thompson, David Thompson, Kastli Schaller, Elizabeth Taylor and Morgan Bruno discovered a highly acid and thermostable xylanase (enzyme) that breaks down cellulose and hemicellulose from biomass into simple sugars used to produce fuels and chemicals.

Learn more about these technologies in a feature story, fact sheets and videos at: <http://www.inl.gov/featurestories/2006-03-02.shtml>.

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